IN THE CLAIMS

Claims 1-56 (canceled).

Claim 57 (new).   A method for controlling an electrospray of fluid emitted by an electrospray nozzle communicating with a source of electrical potential and having a nozzle tip which is displaced from a counterelectrode or mass spectrometer inlet, to achieve and maintain a predetermined electrospray pattern, which comprises

    a) focusing light from a source of light to intersect one or more of the liquid cone, jet and plume of the fluid emitted by the electrospray nozzle,

    b) detecting scattered light patterns, transmitted light patterns or both, passing through, reflected by or emitted from said fluid emitted by said electrospray nozzle as a result of said intersection of said light with said one or more of said liquid cone, jet and plume, with one or more photo detectors and generating analog electronic signals containing sufficient information to represent the detected scattered light patterns, transmitted light patterns, or both,

    c) converting said analog electronic signals into a digital electronic patterns,

    d) interpreting said digital electronic patterns with a first computer or

2

microprocessor system, and transmitting said interpreted patterns to a second computer or microprocessor,

e) comparing said interpreted patterns to a reference pattern, which is defined by the predetermined electrospray pattern, with a second computer or microprocessor, and generating a control signal in response to said comparison , and transmitting said control signal to a controller, which, in accordance with said control signal,

f) displaces said nozzle or said counterelectrode, or both, to adjust the distance between said electrospray nozzle and said counterelectrode or changes the voltage applied to said nozzle with respect to said counter electrode or mass spectrometer inlet if and to the extent necessary to adjust the morphology of said electrospray to result in an interpreted pattern towards that of the predetermined electrospray pattern.

Claim 58 (new).   The method of Claim 57, wherein said first computer or microprocessor and said second computer or system are combined into a single computer or microprocessor.

Claim 59 (new).   The method of claim 57 wherein an amplification system is incorporated in said one or more photo detectors, and said analog electronic signals are amplified.

3

Claim 60 (new).   The method of claim 57, wherein said one or more photo detectors are one or more photo diodes, one or more CCD cameras, or one or more of each.

Claim 61 (new).   The feedback control system of claim 60 wherein said one or more photo detectors is a CCD camera and said CCD camera is combined with a microscope.

Claim 62 (new).   The method of claim 61, wherein said source of light is a continuous source of light and said controller changes the voltage applied to said nozzle with respect to said counter electrode or said mass spectometer inlet.

Claim 63 (new).   The method of claim 62 wherein first computer is programmed with a first algorithm for empirical image measurement, said first algorithm being responsive to the digital electronic pattern, and said second computer is programmed with a second algorithm for generating and maintaining conditions in the of said electrospray to produce an image of a predetermined electrospray pattern.

Claim 64 (new).   The method of claim 63, wherein said second algorithm is adapted to control an electrical power supply to said electrospray nozzle and adjust the voltage provided by said source of electrical potential to maintain said electrospray pattern to include a plume in a cone-jet mode.

4

Claim 65 (new).   The feedback control system of claim 63, wherein said second algorithm is adapted to control an electrical power supply to said electrospray nozzle and adjust the voltage provided by said electrical power supply to maintain said electrospray pattern to include a plume in a dripping mode.

Claim 66 (new).   The method of claim 62 wherein said electrospray nozzle is a multi-jet nozzle, said controller is an image morphology control system, said first computer is programmed with a first algorithm for empirical image measurement, said first algorithm being responsive to the morphologies of a plurality of electrospray plumes emanating from said multi-jet nozzle, and said second computer is programmed with a second algorithm for generating and maintaining predetermined morphological conditions in said electrospray plumes.

5